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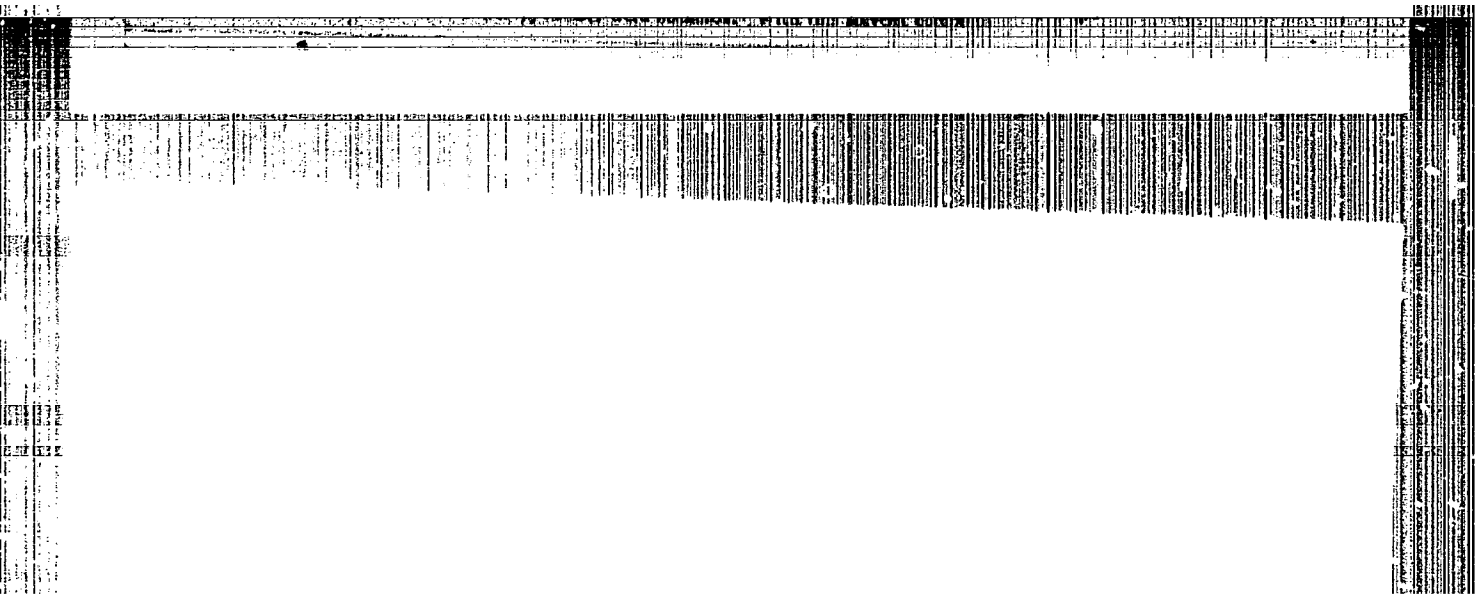

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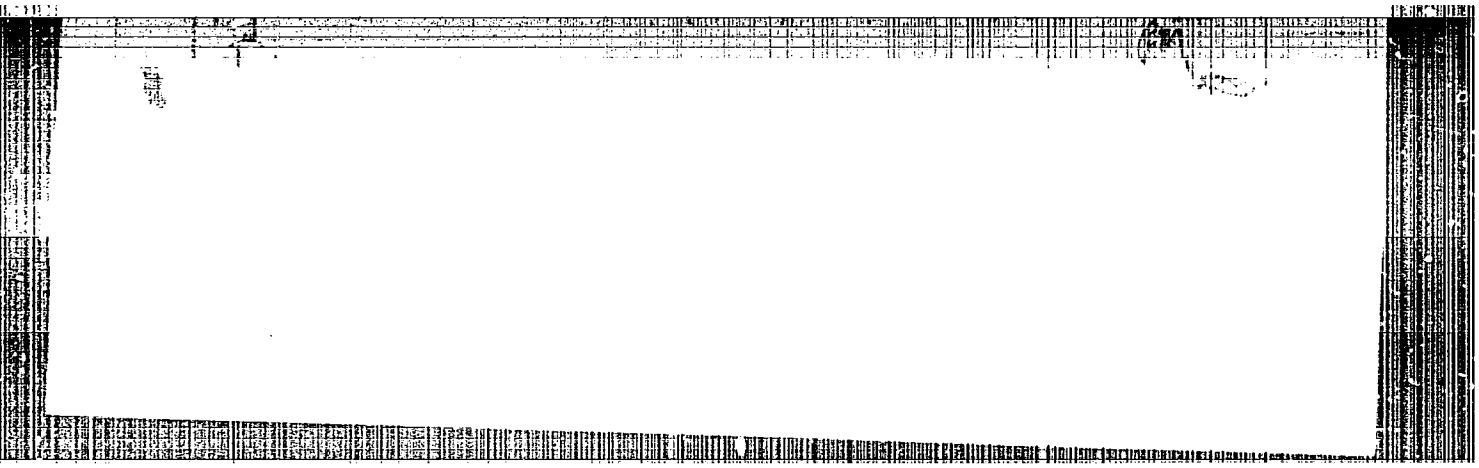

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KAFAROV, V.V.; GORDIYEVSKIY, L.A.

Flow of the extractive distillation process. Zhur.prikl.khim. 29 no.5:713-723 My '56. (MLRA 9:8)
(Distillation)

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KAFAROV, V.V.

"Foam processing of gases and liquids." M.E. Pozin, and others. Reviewed by V.V. Kafarov. Zhur.prikl.khim. 29 no.5:806-807 My '56. (MLRA 9:8)

(Chemical engineering) (Foam)

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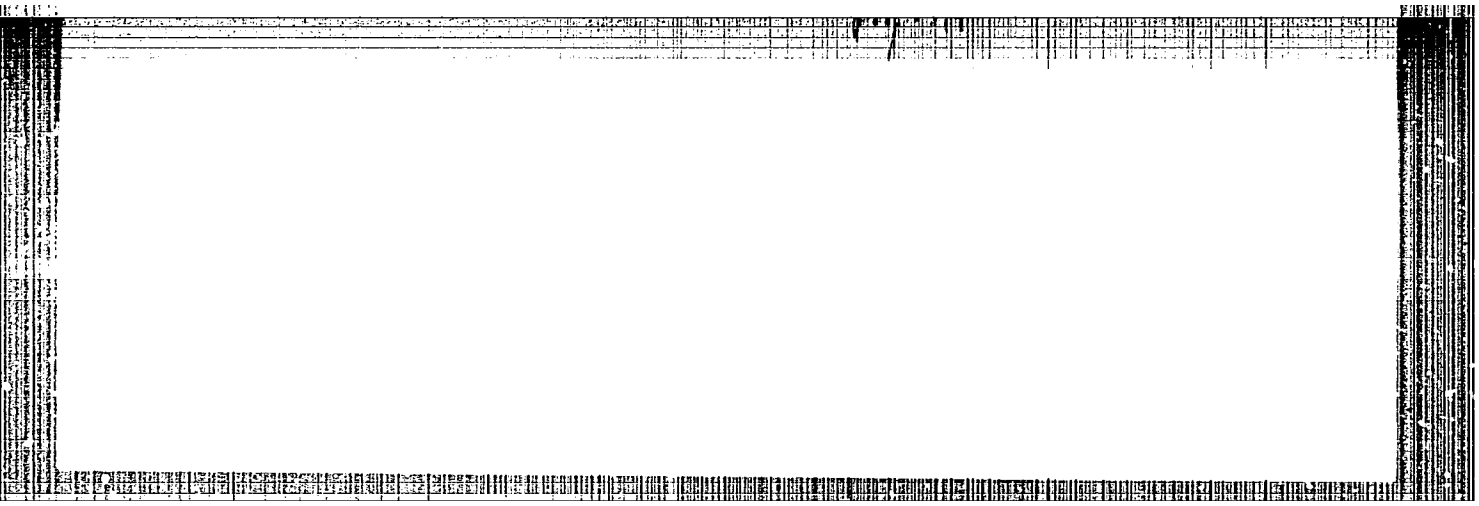

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KOGAN, Vladimir Borisovich; FRIDMAN, Viktor Mikhaylovich; KAFAROV, V.V., doktor tekhn.nauk, prof., redaktor; TOMARCHENKO, S.L., redaktor; LEVIN, S.S., tekhnicheskiy redaktor; ERLIKH, Ye.Ya., tekhnicheskiy redaktor.

[Manual on equilibria between fluids and vapors in binary and multicomponent systems] Spravochnik po ravnovesiiu mezhdu zhidkost'iu i parom v binarnykh i mnogokomponentnykh sistemakh. Pod red. V.V.Kafarova. Leningrad, Gos.nauchno-tekhn.izd-vo khim. lit-ry, 1957. 497 p. (MIRA 10:11)
(Systems (Chemistry)) (Chemical equilibrium)

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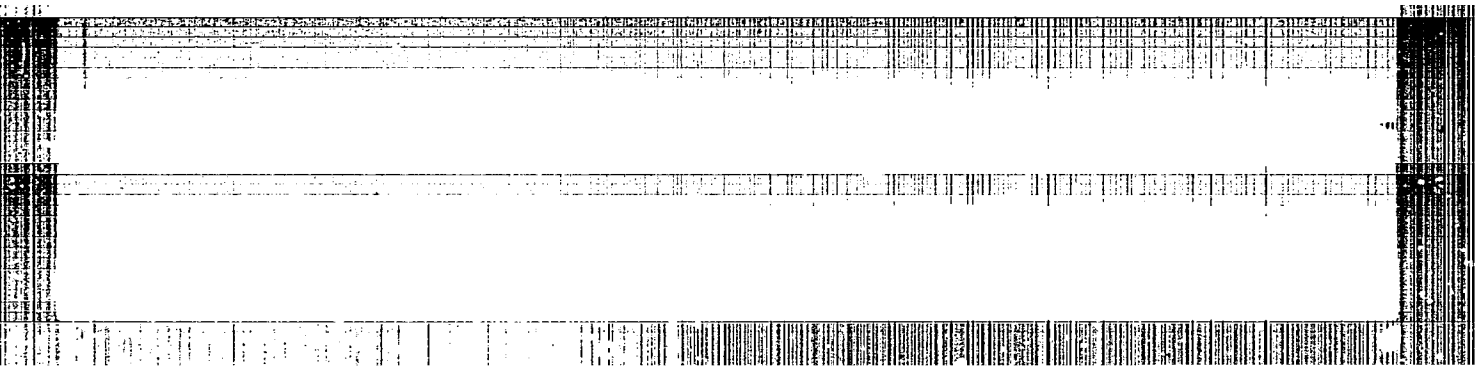

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KAFAROV, V.V., professor.

Present stage of distillation technique. Khim. nauka i prom. 2 no.1: 81-91 '57. (MLRA 10:4)
(Distillation apparatus)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; ZHUKOVSKAYA, S.A.

Studying the operation of jet extractors used for penicillin extraction. Med. prom. 11 no.5:23-32 My '57. (MLRA 10:6)
(EXTRACTION APPARATUS) (PENICILLIN)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KASATKIN, A.G.; KAFAROV, V.V.; SLOBODYANIK, I.P.

Study of the chemical sorption process of CO_2 by NaOH and KOH solutions in a packed column. Trudy MKHTI no.24:389-404 '57.
(Sorption) (Carbon dioxide) (MIRA 11:6)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

SOV/124-58-8-8992

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 8, p 97 (USSR)

AUTHORS: Kasatkin, A.G., Kafarov, V.V., Panfilov, M.N.

TITLE: Investigating the Mixing Process in a Gas-liquid System When the Mixing is Done With Mechanical Mixers (Issledovaniye protsessa peremeshivaniya mekhanicheskimi meshalkami v sisteme gaz-zhidkost')

PERIODICAL: Tr. Mosk. khim.-tekhn. in-ta im. D.I. Mendeleyeva, 1957, Nr 24, pp 413-427

ABSTRACT: An analog study is made of the operation of mechanical mixers, and 14 different types of mixer are subjected to tests. The power characteristic of the mixers is represented as a relationship between two ratios: 1) That of the energy required for mixing in the case of the gas-liquid system (N_g) to the energy required for mixing in the case of the plain liquid (N_o) without the gas, and 2) the ratio V_g/nd^3 (wherein V_g is the quantity of gas fed into the mixer and nd^3 is the mixer's mixture output per unit volume. The authors evolve empirical equations for calculation of the energy required for mixing in

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Investigating the Mixing Process in a Gas-liquid System (cont.)

the case of water-air systems and systems of similar types. For the mixers tested, a determination is made of the limiting values of the V_g/nd^3 ratio, beyond which values the mixers start to choke. An oxygen-absorption process is used to simulate the diffusion phenomena associated with the mixing action in a gas-liquid system. The authors propose a method for evaluating the efficiency of mixers over a broad range of operating conditions, and a comparative evaluation is made of the efficiency of the mixers tested. Bibliography: 14 references.

Ye.M. Minskiy

Card 2/2

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.

Calculations of batch fractionating columns used for separating constant-composition distillatec. Trudy MKHTI no.24:428-431 '57. (Plate towers) (MIRA 11:6)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; TROFIMOV, V.I.

Performance analysis and design of packed absorption columns for conditions of developed free turbulence. Zhur.prikl.khim. 30 no.2: 211-221 F '57. (MLRA 10:5)

(Plate towers)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; GORDIYEVSKIY, L.A.

On I.N. TSinaris' remark on the paper entitled "Basic principles of selecting a solvent for the separation of azeotropic systems by means of extractive distillation." Zhur.prikl.khim. 30 no.3:497-498 Mr '57. (MLRA 10:5)

(Azeotropy) (Distillation, Fractional)

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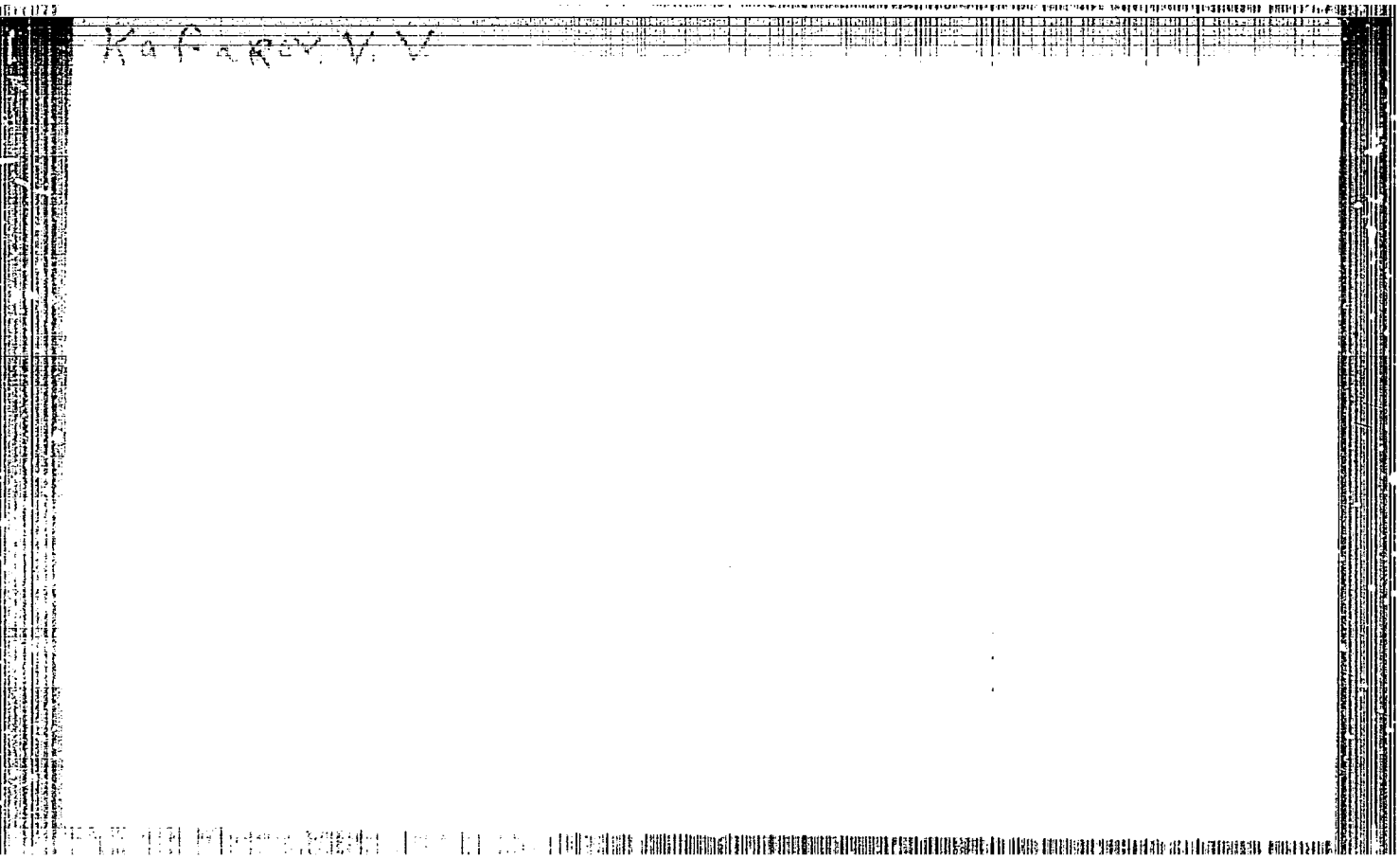

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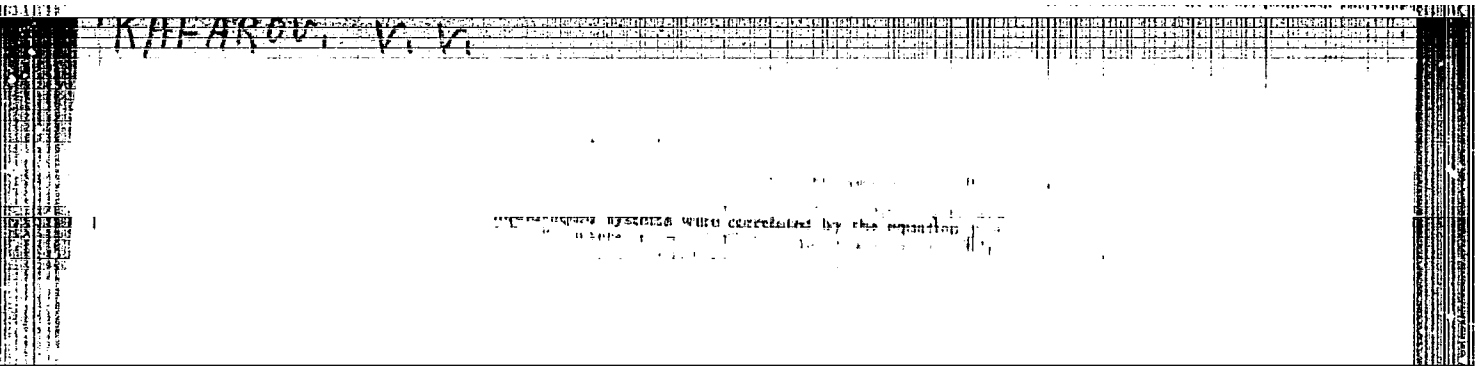

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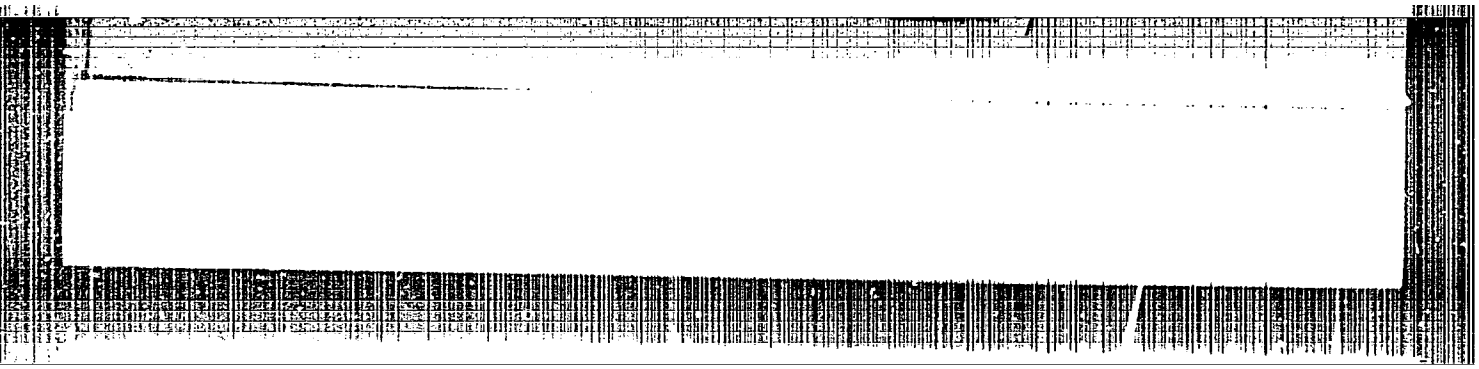

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from a turbulence arising at the firm boundary of a wall. b) A fixed phase limit, by its nature different from a firm surface, exists under limited conditions. c) Under certain hydrodynamic regimens and under conditions of a developed free turbulence, the fixed dividing limit is continuously changed and renewed. With that, the energy developed in the currents exceeds the surface tension, and the gas or steam vortices penetrate into the fluid stirred up. The phases continuously revert. d) In 2phase currents there are no films at all, and the substance is passed on by the molecular and by the turbulent diffusion within the range of each single phase. e) In a developed free turbulence the turbulent diffusion is stronger than the molecular diffusion. The influence of individual diffusion qualities decreases. This offers many new opportunities for the application of similitude principles to diffusion processes. f) The equations mentioned above are confirmed by experimental results with rectification, adsorption and extraction columns and so on (references 1-4). g) In accordance with the theses explained above the diffusion apparatus can be classified as follows: I. Apparatus with a fixed surface of the phase contact: 1) for the barbotage with

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little Pe values, 2) film ("plenochnyye") apparatus, turilles ("turilly"), tsellariuses, and so on. II. Apparatus in which the surface of the phase contact is formed during the movement of the currents: 1) emulsifying attachment columns ("nasadochnyye kolonny"), 2) emulsifying sieve columns, 3) apparatus with mixers under an auto-module regimen, string apparatus. h) The application of similitude principles to diffusion processes and diffusion apparatus is only possible in a regimen of developed free turbulence. This possibility depends on the following conditions: 1) The character of the determinative hydrodynamic characteristics is the same. That accords to the thesis that the individual diffusion characteristics do not influence the mass exchange ("massoobmen") under conditions of a developed free turbulence. 2) As the relation E_r/E_d (these are the coefficients of the turbulent exchange of energy and mass) is constant, it is possible to calculate the delivered mass, that is: the whole apparatus, according to certain hydrodynamic parameters. The regime of the developed free turbulence is most effective, as at maximum speed - and consequently at maximum productivity -

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

AUTHOR: Kafarov, V. V. SOV/156-58-1-43/46

TITLE: The Law of Corresponding States as Applied to the Analysis of Diffusion Processes (Printsip sootvetstvennykh sostoyaniy v analize diffuzionnykh protsessov)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya tekhnologiya, 1958, Nr 1, pp. 176 - 179 (USSR)

ABSTRACT: It is well known that the law of corresponding states is based on the fact that the phenomenon or process considered which takes place under given conditions is compared with the critical state of the system. This law has been applied in a number of calculations. In his paper the author endeavors to expand the range of application of this law, and to extend it to intensified diffusion processes that occur at great velocities of phase flows. Here, 4 characteristic types of mass exchange are on principle possible (Refs 4,5): 1) Molecular exchange, where the mechanism of mass transfer is determined by molecular diffusion D only; 2) an intermediate exchange, where molecular diffusion D prevails in the transfer mechanism against turbulent diffusion ε_g, i. e., $D > \varepsilon_g$; 3)

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turbulent exchange, where $\varepsilon_g > D$, and 4) exchange under a freely developed turbulence arising in two-phase flows ($\varepsilon_g \to \infty$). There are 3 critical points corresponding to the transitions from one state to the other. Two of them can be used in applying the law to the processes mentioned in the title. The values of their parameters may be considered as corresponding states. However, actually only 1 critical point between the 1st and 2nd types of mass exchange is used, which considerably limits the analysis. The author makes use of several equations (1) - (9) for computing not only processes of physical absorption (Ref 17) but also of chemisorption. There are 1 figure and 18 references, 13 of which are Soviet.

ASSOCIATION: Kafedra protsessov i apparatov Moskovskogo khimiko-tekhnologicheskogo instituta im.D.I.Mendeleyeva (Chair of Processes and Equipment of the Chemical Engineering Institute imeni D.I.Mendeleyev, Moscow)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

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The Law of Corresponding States as Applied to the Analysis of Diffusion Processes

SOV/156-58-1-43/46

SUBMITTED: September 27, 1957

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APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; MALINOVSKAYA, T.A.

Investigating the effect of cake structure on velocity of industrial filtration. Khim. nauka i prom. 3 no.1:133-134 '58. (MIRA 11:3)

1. Moskovskiy khimiko-tekhnologicheskiy institut im. D.I. Mendeleyeva.
(Filters and filtration)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

AUTHOR: Kafarov, V. V.

TITLE: Generalization of the Equation for the Transfer of Mass (Obobshchennoye uravneniye massoperedachi)

SOV/156-58-3-50/52

PERIODICAL: Doklady vysshey shkoly, Khimiya i khimicheskaya tekhnologiya 1958, Nr 3, pp. 595-597 (USSR)

ABSTRACT: A general equation for the transfer of mass was formulated by means of which the analysis in diffusion apparatus can be calculated. At a given hydrodynamic state - luminary, turbulent or freely developed turbulent - the factor for the dynamic state of the surface is calculated.

$$f = \frac{\Delta p_{gas-liq.} - \Delta p_{gas}}{\Delta p_{gas}} = \beta \left(\frac{\lambda}{G}\right)^3 \cdot \left(\frac{\rho_{gas}}{\rho_{liq.}}\right)^b \cdot \left(\frac{\mu_{liq.}}{\mu_{gas}}\right)^c$$

When the hydrodynamic condition is not fixed the equation for the mass transfer is used the following way:

$$\frac{Nu}{[1 + f] \cdot Pr^n} = \varphi (Re)$$ n, Pr = constant magnitudes of the gas.

There are 12 references, 5 of which are Soviet.

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Generalization of the Equation for the Transfer of Mass SOV/156-58-3-50/52

ASSOCIATION: Kafedra protsessov i apparatov khimicheskoy [illegible] Moskovskogo khimiko-tekhnologicheskogo institute imeni D. I. Mendeleyeva (Chair For the Processes and Apparatus of Chemical Industry at the Moscow Chemical and Technological Institute imeni D. I. Mendeleyev)

SUBMITTED: February 6, 1958

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

5(0)

AUTHOR: Kafarov, V. V., Doctor of Technical Sciences

SOV/30-58-12-22/46

TITLE: Brief Communications (Kratkiye soobshcheniya) The 134th Conference of the American Society of Chemistry (134-ye sobraniye Amerikanskogo khimicheskogo obshchestva)

PERIODICAL: Vestnik Akademii nauk SSSR, 1958, Nr 12, pp 79 - 80 (USSR)

ABSTRACT: This conference was held in Chicago from September 7 to 12, 1958 and was attended by about 10,000 persons. In 22 sections about 1500 reports were heard, some of the sections meeting jointly. The individual sections held symposia on chemical genetics, proteins, modern methods of analysis and other subjects. The section of chemical literature discussed the nomenclature of organic compounds. In this connection a draft elaborated by Soviet chemical scientists was approved by part of the American chemists. In recent years, in particular after the Institute of Scientific and Technical Information had been established in the USSR, the interest for an organization of information exchange in the fields of chemistry and chemical technology and of scientific and technical information as a whole has greatly increased. The work

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

Brief Communications. The 134th Conference of the American Society of Chemistry

SOV/30-58-12-22/46

centers in the USSR.

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KAFAROV, V.V.; ZHUKOVSKAYA, S.A.

Main characteristics of the spray extractor action and comparative effectiveness of extractors in general. Zhur.prikl. khim. 31 no.3: 376-386 Mr '58. (MIRA 11:4)
(Extraction (Chemistry))

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; TROFIMOV, V.I.

Analysis of diffusion processes based on the degree of free turbulence. Zhur.prikl.khim. 31 no.12:1809-1816 D '58.

(MIRA 12:2)

(Diffusion)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

25(5)

AUTHORS: Kafarov, V. V., Tikhomirov, V. B. SOV/64-59-4-17/27

TITLE: Flow-column for Carrying-out Diffusion Processes (Struynaya kolonna dlya provedeniya diffuzionnykh protsessov)

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 4, pp 62-64 (USSR)

ABSTRACT: The use of extractors for diffusion processes, which are based upon the principle of a jet pump, is only of advantage with systems which make possible to carry out the extraction process in one or two steps. With multi-step extractions the operation becomes complicated because of the transportation of the liquid from one extractor to the other, and an additional installation of several separators for phase separation after each extractor. Experiments were made concerning the use of ejector units for the separation of the liquids and for the purpose of increasing the final effect when the liquid enters the column (Ref 6). Further investigations led to the construction of a counterflow extractor in which the phases are separated after each step, without using additional devices for the transportation of the liquid, after a previous mixing of the phases (Ref 9). This basically new type of a column may apart from diffusion

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processes of the extraction (liquid - liquid) also be used for the rectification (steam - liquid), and for the absorption (gas - liquid). Several columns of this type, which were of different dimensions, were tested with the extraction process. One of these models (Fig 1) has two steps with one ejector each. The column was made of glass. Its dimensions and a description is given. When testing the operation of the column in a test unit (Fig 2), for which purpose mixtures having a difference in the specific weight of the phases of from 0.1 - 0.4 g/cm^3 were used, it was shown that the required phase separation was obtained with a height of the column segments of h = 600-800 mm. The values of the "height of the equivalent theoretical bottoms" obtained with the flow-column were almost 4 times lower than those holding for attachment columns. There are 2 figures and 9 references, 6 of which are Soviet.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

SLOBODYANIK, I.P.; KASATKIN, A.G.; KAFAROV, V.V.

Calculation of packed columns under conditions of chemisorption. Izv.vys.ucheb.zav.; khim.i khim.tekh. 2 no.6:956-961 '59. (MIRA 13:4)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva. Kafedra protsessov i apparatov.
(Packed towers)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

9(0) SOV/63-4-1-19/31

AUTHOR: Kafarov, V.V., Profensor

TITLE: At the 134th Congress of the American Chemical Society (Na 134-m sobranii Amerikanskogo khimicheskogo obshchestva)

PERIODICAL: Khimicheskaya nauka i promyshlennost', 1959, Vol 4, Nr 1, pp 122-124 (USSR)

ABSTRACT: The American Chemical Society convened a conference on September 7-12, 1958, in Chicago. It was attended by 11,000 chemists.

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307/63-4-6-36/37

AUTHOR: Kafarov, V. V. (Professor)

TITLE: Letter to the Editor. Concerning the Optimum Operating Conditions of a Packed Column

PERIODICAL: Khimicheskaya nauka i promyshlennost . 1959, Vol 4, Nr 6, p 813 (USSR)

ABSTRACT: This is a criticism of an article (this periodical, Vol 3, Nr 6, 1958) by Akopyan, L. A., Planovskiy, A. N., and Kasatkin, A. G. The present author feels that the term "optimum operating conditions" should have been more clearly defined, i.e., whether "optimum" refers to yield, separation, hydraulic resistance, etc. Also, the equation derived for mass transfer seems not to take the viscosity of the liquid into account and seems applicable only to the gaseous phase. There are 13 references, 8 Soviet, 2 German, 3 U.S. The U.S. references are: A. J. Teller, Chem. Eng., 61, Nr 9, 188 (1954); A. J. Teller, Chem. Eng. Progr. , 50, 65 (1954); M. G. Molstad, L. F. Parsley, Chem. Eng. Progr., 46, 20 (1950).

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

5(4) SOV/80-32-4-14/47

AUTHORS: Kafarov, V.V., Babanov, B.M.

TITLE: The Surface of the Phase Contact of Mutually Insoluble Liquids in the Process of Stirring by Mechanical Stirrers (Poverkhnost' fazovogo kontakta vzaimnonerastvorimykh zhidkostey v protsesse peremeshivaniya mekhanicheskimi meshalkami)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 4, pp 789-796 (USSR)

ABSTRACT: Mutually insoluble liquids are stirred to obtain emulsions, which is a process widely used in industry [Ref 1]. The authors carried out an investigation to determine the surface of the phase contact, which is formed during the stirring by mechanical stirrers. A specially designed by the authors [Ref 2] sediment-meter was applied for measuring the degree of dispersion and the surface of contact. Experiments on stirring were carried out with four systems of liquids, four types of mechanical stirrers (turbine-type, with vertical vanes, with inclined vanes under 45°, and propeller-type) and in vessels of two different dimensions but geometrically similar shape. The effect of the following factors was determined: 1. The concentration of the dispersed phase; 2. The number of stirrer revolutions; 3. The stirrer diameter ; 4. The viscosity; 5. The value of surface tension; 6. The density. The results of measurements are presented in Graphs 2 to 6. They were compared with results obtained by Vermeulen et al. [Ref 3] by the optic-electrical method, and the average deviation of the experimental points in the present study from the Vermeulen straight

Card 1/3

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

The Surface of the Phase Contact Mutually Insoluble Liquids in the Process of Stirring by Mechanical Stirrers

line was found not to exceed 12% as is shown in Graph 1. The present results are shown in Graph 8 by four straight lines (one for each type of the stirrers) the analytical expression of which has the shape:

$$A \cdot d_m = C \cdot We^{0.5} \cdot Re^{01} \cdot \alpha^{0.84}$$

where A is the specific surface of the phase contact in m^2/m^3; d_m is the diameter of the stirrer; C is a constant which characterizes the type of the stirrer (its values for the 4 types employed are cited in a table); We is Weber criterion; Re is Reynolds number, and α is a number characterizing the concentration of the dispersed phase. The relationship found

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

The Surface of the Phase Contact Mutually Insoluble Liquids in the Process of Stirring by Mechanical Stirrers

can be used for studying the processes of mass transfer. There are 9 graphs, 1 table and 14 references, 5 of which are Soviet, and 9 English.

SUBMITTED: December 31, 1957

Card 3/3

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.

International Symposium on Distillation. Khim.prom. no.4:351 Je '60. (MIRA 13:8)
(Distillation--Congresses)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

S/153/60/003/02/30/034
B011/B006

5.1105

AUTHORS: Slobodyanik, I. P., Kasatkin, A. G., Kafarov, V. V.

TITLE: Influence of Hydrodynamic Conditions on Chemosorption in Checker Columns

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol. 3, No. 2, pp. 369-374

TEXT: The authors found that the papers published on investigations of chemosorption all refer to special cases, and that the results obtained are therefore not valid for other conditions. The present paper is an investigation of the effect of flow rates of the solution and the gas on the rate of chemosorption. The absorption of CO_2 by NaOH and KOH in a checker column was used as an example. To render a comparison between their data and those of other investigators possible, the authors also evaluated their data basing on the volume coefficients $K_G a$ of absorption. Fig. 1 gives a scheme of the experimental apparatus. Experiments were carried out at 17-19°. Fig. 2 shows the dependence of the rate of

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

Influence of Hydrodynamic Conditions on Chemosorption in Checker Columns

S/153/60/003/02/30/034
B011/B006

CO_2 absorption by KOH solutions on the rate of gas flow at a constant rate of flow of the solution L = 153 kg/h. The maximum absorption rates with respect to gas (1) and with respect to the solution (2) were calculated by means of the corresponding equations. As is shown in Fig. 2, the absorption rate increases practically linearly with an increase in the gas rate up to the point of beginning emulsification. Thereafter, it increases rapidly until complete emulsification occurs. In order to clarify the influence of the flow rate of the solution on the rate of absorption, the gas rate, the CO_2 content in the gas at its entrance into the column, and the initial concentration of the NaOH- and KOH solutions were maintained constant. The rate of CO_2 absorption by NaOH solutions as a function of the rate of flow of the solution is illustrated in Fig. 3. For a comparison, the results given in Ref. 2 are represented in Fig. 4. As is evident from the diagrams, the rate of CO_2 absorption by NaOH solutions is influenced more strongly by the rate of the solution than by the gas rate (before the occurrence of emulsification). The highest

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Influence of Hydrodynamic Conditions on Chemosorption in Checker Columns

S/153/60/003/02/30/034
B011/B006

efficiency of the column is therefore attained under conditions of emulsification. Under the same conditions, KOH solutions absorb CO_2 slightly faster than do NaOH solutions. There are 4 figures and 11 references, 7 of which are Soviet.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva; Kafedra protsessov i apparatov (Moscow Institute of Chemical Technology imeni D. I. Mendeleyev, Chair of Processes and Apparatus)

SUBMITTED: September 11, 1958

Card 3/3

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

is linear; it has, however, a differing character in different sections of the change in velocity of the solution. The authors derive the equations

$$G_A = G_{A.em}(0.18 + 0.43\ L/L_{em}) \qquad (5)$$

at $0.25 < L/L_{em} < 0.83$

$$G_A = G_{A.em}(2.63.L/L_{em} - 1.63) \qquad (6)$$

at $0.83 < L/L_{em} < 1$

where L and G are the velocities of the solution and the gas under given conditions without emulsification, L_{em} and G_{em} the velocities of the solution and the gas with emulsification, and G_A and $G_{A.em}$ the absorption rates under given and emulsifying conditions, respectively. The equation for the determination of the absorption rate of CO_2 in NaOH solutions in packed towers under emulsifying conditions was derived in the preceding investigation (Ref.1):

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

IV. Rate of CO_2 Absorption by Films of NaOH Solutions in Packed Towers

S/153/60/003/004/033/040/XX
B020/B054

$G_{A.em} = 0.619.L_{em}.d_e^{-0.585} H^{0.8} \alpha^{0.9} C_{in}^{1.16}$ (7), where H is the height of the filling body, C_{in} the initial concentration of the NaOH solution and d_e the equivalent diameter of the filling body. The absorption rate of CO_2 in NaOH solutions in a packed tower under any hydrodynamic conditions can be calculated from equations (5), (6), and (7). To confirm the accuracy of the equations derived, the authors calculated the absorption rate for more than 150 results given in publications (Refs.2,3). Fig.2 compares the calculated results with the experimental ones. Fig.3 compares the experimental values of the absorption rate determined in the gaseous and liquid phases by I. B. Tepe and B. F. Dodge (Ref.2). The method suggested for analyzing the chemisorption processes permits a calculation of chemisorption processes in packed towers over a wide range of process conditions. There are 3 figures and 6 references: 2 Soviet and 4 US.

Card 3/4

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

VIGDOROV, A. S., KAFAROV, V.V.

Generalized definition of the efficiency coefficient of plates in rectification columns. Zhur.prikl.khim. 33 no.5:1091-1101 My '60. (MIRA 13:7)

(Plate towers) (Mass transfer)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

S/080/60/033/007/004/020
A003/A001

AUTHOR: Kafarov, V. V.

TITLE: General Type Equations for Mass Transfer Processes

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol. 33, No. 7, pp. 1495-1499

TEXT: In the analysis of the kinetics of mass transfer processes two principal problems must be solved: 1) the problem of the surface state of the phase contact and 2) the problem of the transfer mechanism, i. e., the molecular or turbulent type. Several theories pertaining to these problems are discussed. By introducing the concept of a dynamic state factor of two-phase system (Ref. 1) it proved to be possible to obtain generalized equations of mass transfer for various hydrodynamic conditions in the operation of diffusion apparatus and to develop a method for obtaining and processing experimental data. The general form of the mass transfer equations with introduction of the dynamic state factor of a two-phase system is given for the gaseous phase and for the liquid phase. For various hydrodynamic conditions the form of the equations mentioned can be made more precise. Equations are derived for the energy consumption in one-phase flow friction, for a diffusion flow, etc.

Card 1/2

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

B/080/60/033/007/004/020
A003/A001

General Type Equations for Mass Transfer Processes

The quantity of the substance transferred is determined by the transfer of the substance in the phase in which it takes place most slowly, i. e., in which the principal resistance is concentrated. Thus, if the gas is easily soluble in the liquid, equation (1) is used, if it is difficultly soluble, equation (2) is employed. In the most uniform distribution of liquid and gas in a two-phase flow, which is attained under the conditions of developed free turbulence in conformity with the structure of the equations (1) and (2), the power exponent n should reach its maximum value, i. e., equal to unity. The analysis of the mechanism of mass transfer in a one-phase flow shows that the analogy between friction, heat- and mass-exchange is possible only in gases. In drop liquids this analogy is not observed. In this case the power exponents of the Reynolds and Prandtl numbers must be determined by experiment. There are 4 references: 2 Soviet, 1American and 1 English.

SUBMITTED: February 12, 1960

Card 2/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; VIGDOROV, A.S.

Generalized expression for determining the number of transfer units. Zhur.prikl.khim. 33 no.7:1506-1513 Jl '60. (MIRA 13:7)

(Mass transfer) (Distillation, Fractional)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KOGAN, Vladimir Borisovich; FRIDMAN, Viktor Mikhaylovich; KAFAROV, Viktor Vyacheslavovich; SUSHKOVA, T.I., red. izd-va; BLEYKH, E.Yu., tekhn. red.

[Manual on solubility] Spravochnik po rastvorimosti. Moskva, Izd-vo Akad. nauk SSSR. Vol.1. [Binary systems] Binarnye sistemy. Book. 1. 1961. 595 p. (MIRA 15:1)

1. Akademiya nauk SSSR. Institut nauchno-tekhnicheskoy informatsii.

(Solubility) (Systems (Chemistry))

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V., doktor tekhn.nauk, prof.; VIGDOROV, A.S., inzh.

Sieve-plate column for carrying out heat and mass transfer processes with a stable amount of liquid. Khim.mash. no.2:6-8 Mr-Ap 61. (MIRA 14:3)

(Plate towers)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

ZELINSKIY, Yu.G.; KAFAROV, V.V.

Hydrodynamic conditions at a perforated plate. Khim. prom. no. 2:122-126 F '61. (MIRA 14:4)
(Plate towers)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V., doktor tekhn.nauk, prof.; VIGDOROV, A.S., inzh.

Comparative study of the hydraulics of sieve plates with various overflow devices. Khim.mash. no.3:13-16 My-Je '61. (MIRA 14:5)
(Plate towers) (Hydraulics)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

SHEN FU; KAFAROV, V.V.

Hydrodynamics and mass transfer in a one-stage jet extractor.
Izv.vys.ucheb.zav.;khim.i khim.tekh. 4 no.3:498-502 '61.
(MIRA 14:10)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva, kafedra protsessov i apparatov khimicheskoy tekhnologii.
(Extraction apparatus)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; LUK'YANOV, B.G.; MURAV'YEV, V.S.

Hydrodynamic conditions for packed rectification columns. Izv. vys.ucheb.zav; khim.i khim.tekh. 4 no.5:854-858 '61. (MIRA 14:11)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva, kafedra protsessov i apparatov khimicheskoy tekhnologii.
(Packed towers)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; MURAV'YEV, V.S.; LUK'YANOV, B.G.

Resistance of packed rectifying columns. Izv.vys.ucheb.zav.; khim. i khim.tekh. 4 no.6:1026-1029 '61. (MIRA 15:3)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva, kafedra protsessov i apparatov.
(Packed towers)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; ZELINSKIY, Yu.G.

Analogy of some hydrodynamic conditions of work of grid-tray and packed columns. Khim.i tekh.topl.i masel 6 no.6:34-40 Je '61. (MIRA 14:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.
(Plate towers) (Packed towers)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; MURAV'YEV, V.S.

Mass transfer in packed absorbers at the phase inversion point.
Zhur. prikl. khim. 34 no.1:214-128 Ja '61. (MIRA 14:1)
(Mass transfer) (Packed towers)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; VIGDOROV, A.S.

Static pressure of foam on sieve plates. Zhur.prikl.khim. 34 no.3: 564-572 Mr '61. (MIRA 14:5)

(Foam) (Plate towers)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.

Interphase turbulence and the phenomena of mass transfer.
Zhur. prikl. khim. 34 no.5:1061-1065 My '61. (MIRA 16:8)

(Mass transfer) (Hydrodynamics)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KOGAN, Vladimir Borisovich; FRIDMAN, Viktor Mikhaylovich; KAFAROV, Viktor Vyacheslavovich; SUSHKOVA, T.I., red. izd-va; BLEYKH, E.Yu., tekhn. red.

[Manual on solubility] Spravochnik po rastvorimosti. Moskva, Izd-vo Akad. nauk SSSR. Vol.1. [Binary systems] Binarnye sistemy. Book 2. 1962. 1959 p. (MIRA 15:4)

1. Akademiya nauk SSSR. Institut nauchnoy informatsii.
(Solubility) (Systems (Chemistry))

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, Viktor Vyacheslavovich. Prinimal uchastiye BOYARINOV, A.I.; ALAVERDOV, Ya.G., red.; MURASHOVA, V.A., tekhn. red.

[Fundamentals of mass transfer; the systems: gas - liquid, vapor - liquid, and liquid - liquid]Osnovy massoperedachi; sistemy gazzhidkost', par - zhidkost', - zhidkost' - zhidkost'. Moskva, Vysshaia shkola, 1962. 654 p. (MIRA 16:3)
(Mass transfer)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; YEREMENKO, V.V.

Conditions of stability and the scale of chemical reactors.
Zhur.prikl.khim. 35 no.10:2251-2262 O '62. (MIRA 15:12)
(Chemical reactors)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; CALKIN, N.P.; TIKHOMIROV, V.B.

Development of new designs for jet extraction columns and the principles of the theory of the process. Ekstr.; teor.,prim.,app. no.2:339-346 '62. (MIRA 15:9)
(Extraction apparatus)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KOGAN, Vladimir Borisovich; FRIDMAN, Viktor Mikhaylovich; KAFAROV, Viktor Vyacheslavovich; SUTKOVA, T.I., red.izd-va; GALIGANOVA, L.M., tekhn. red.

[Handbook on solubility]Spravochnik po rastvorimosti. Moskva, Izd-vo Akad. nauk SSSR. Vol.2. [Ternary multicomponent systems] Troinye, mnogokomponentnye sistemy. Book 1. 1963. 943 p. (MIRA 16:1)

1. Moscow. Vsesoyuznyy institut nauchnoy i tekhnicheskoy informatsii.

(Systems (Chemistry)) (Solubility)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KOGAN, Vladimir Borisovich; FRIDMAN, Viktor Mikhaylovich; KAFAROV, Viktor Vyacheslavovich; SUSHKOVA, T.I., red.izd-va; SOROKINA, V.A., tekhn. red.

[Manual on solubility]Spravochnik po rastvorimosti. Moskva, Izd-vo Akad.nauk SSSR. Vol.2.[Ternary multicomponent systems] Troinye, mnogokomponentnye sistemy. Book 2. 1963. 2066 p. (MIRA 16:4)

1. Moscow. Vsesoyuznyy institut nauchnoy i tekhnicheskoy informatsii.
(Systems (Chemistry)) (Solubility)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

REUTSKIY, V.A.; KAFAROV, V.V.

Modeling of the processes of chemisorption in packed columns. (MIRA 16:3)
Khim.prom. no.1:52-59 Ja '63.
(Adsorption) (Packed towers) (Chemical models)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V., doktor tekhn.nauk, prof.; ALEKSANDROVSKIY, A.A., inzh.

Hydrodynamics of rotary plate apparatus. Khim.mashinostr. no.2:10-14 Mr-Ap '63. (MIRA 16:4)

(Chemical engineering—Equipment and supplies)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; YEREMENKO, V.V.

Conditions for the stability of a process in a semicontinuous reactor. Khim. prom. no.2:125-129 F '63. (MIRA 16:7)

(Chemical reactors)
(Chemical equilibrium)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

MURAV'YEV, V.S.; KAFAROV, V.V.; LUK'YANOV, B.G.

Interaction energy in two-phase flows in packed columns. Izv.vys.-ucheb.zav.;khim.i khim.tekh. 6 no.1:155-159 '63. (MIRA 16:6)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva, kafedra avtomatizatsii khimicheskikh proizvodstv.
(Packed towers) (Gas flow)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; ZELINSKIY, Yu.G.

Mass transfer on downcomerless grid trays. Zhur. prikl. khim. 36 no.8:1730-1737 Ag '63. (MIRA 16:11)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

VLEDUTS, G.E.; KAFAROV, V.V., red.; LISICHKIN, S.M., red.;
MIKHAYLOV, A.I., red.; SEMENOV, Yu.V., red.;

[Scientific information problems in the field of chemistry] Nekotorye voprosy nauchnoi informatsii v oblasti khimii. Moskva, Izd-vo AN SSSR. No.1. [Ways of improving the systematization of chemical indexes] O putiakh usovershenstvovaniia sistematiki khimicheskikh ukazatelei. 1958. 77 p.
(Chemistry--Abstracting and indexing) (MIRA 16:10)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

SHESTOPALOV, V.V.; KAFAROV, V.V.; BLYAKHMAN, L.I.

Longitudinal mixing in packed columns. Khim. prom. no.5: 367-371 My '63. (MIRA 16:8)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

BIRYUKOV, V.V.; KAFAROV, V.V.; Prinimali uchastiye: NOSOV, Yu.I.; DORFMAN, A.D.

Mathematical modeling of vapor-liquid heat exchangers. Khim.prom. no.12:908-914 D '63. (MIRA 17:3)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; ZELINSKIY, Yu.G.

Calculation of the coefficients of mass transfer in downcomerless plates. Zhur. prikl. khim. 36 no.10:2210-2217 O '63. (MIRA 17:1)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.

On the article by V.M. Ramm and A.IU. Zakgeim "Concerning a theory of mass transfer." Zhur. prikl. khim. 36 no.10: 2316-2318 O '63. (MIRA 17:1)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V. V.; PLYUTTO, V. P.; PEROV, V. L.

Development of mathematical descriptions of the standard processes in chemical technology. Khim prom no. 3:218-221 Mr '64. (MIRA 17:5)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V. V.; ALEKSANDROVSKIY, A. A.; LEONT'YEV, A. N.

"Hydrodynamics and mass transfer in rotating equipment."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Kazan' Chemical Technology Inst.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

MURAV'YEV, V.S., kand.tekhn.nauk; KAFAROV, V.V., doktor tekhn.nauk

Diagram for the hydrodynamic state of a two-phase system in packed columns. Khim.mashinostr. no.3:17-19 My-Je '64.

(MIRA 18:1)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; SERGEPOPALOV, V.V.

Influence of the longitudinal stirring of the liquid on the mass transfer process in a packed column. Zhur. prikl. khim. 37 no.11:2461-2468 N '64 (MIRA 18:1)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.; [illegible], M.G.

Hydrodynamics of sieve plates. Zhur. prikl. khim. 37 no.12: 2672-2676 D '64. (MIRA 18:3)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

L 18603-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 AFTC(p)/AEDC(a)/ESD(dp) RM

ACCESSION NR: AP4044444 S/0076/64/038/008/2023/2029

AUTHOR: Biryukov, V. V.; Kafarov, V. V.

TITLE: The use of analog computers for the study of reaction kinetics

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 8, 1964, 2023-2029

TOPIC TAGS: chemical kinetics, programming, computer technique, analog computers, reaction rates

ABSTRACT: Programming for analog computer was studied to solve gener[illegible]

[illegible] tables, 4 figures

Card 1/2

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L 18603-65
ACCESSION NR AP4044444

ASSOCIATION Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Moscow Chemical Technology)

SUBMITTED: 10Nov63 ENCL. 00

SUB CODE: DP, GC NO REF SOV: 006 OTHER: 008

Card 2/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V., doktor tekhn.nauk, prof.; [illegible], A.P., kand.tekhn.nauk

Mass exchange in rotary plate equipment. Khim. i neft. mashinostr. no.1:16-20 Ja '65. (MIRA 18:3)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

SOURCE: Izmeritel'naya tekhnika, no. 2, 1963, 5-6

TOPIC TAGS: [illegible] measuring instrument, automatic instrument

Card 1/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

ACCESSION NR: AP5009873

ASSOCIATION: none

NO REF SOV: 002 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V., prof.; LUTSENKO, V.A.

Use of analog computers for the analysis of standard chemical reactions. Zhur. VKHO 10 no.1:2-11 '65.

(MIRA 18:3)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

AKHNAZAROVA, S.L., inzh.; KAFAROV, V.V., doktor tekhn. nauk

Automatic control of the neutralizer used in the production ammonium nitrate. Mekh. i avtom. proizv. 19 no.8:25-27 Ag '65.
(MIRA 18:9)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

L 16787-66 EWT(m)/EPF(n)-2/EWP(t) IJP(c) JD

ACC NR: AP6002507 (A) SOURCE CODE: UR/0286/65/000/023/0016/0016

AUTHORS: Akhnazarova, S. L.; Kafarov, V. V.; Ordyan, V. A.; Kalashyan, V. M.

ORG: none

TITLE: A method for automatically regulating the process of neutralizing nitric acid in the production of ammonium niter. Class 12, No. 176572

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 16

TOPIC TAGS: niter, nitrogen compound, ammonium, nitric acid

ABSTRACT: This Author Certificate presents a method for automatically neutralizing nitric acid in the production of ammonium niter. The method involves adjusting pH of the alkali by changing the feeding rate of nitric acid and correcting the concentration of nitric acid. To optimize the process, the pressure of the liquor vapor is also adjusted.

SUB CODE: 07/ SUBM DATE: 13Mar65

Card 1/1

UDC: 66.--503.51:661.525.3

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

Analysis of ammonia and ammonium nitrate losses during neutralization in the production of ammonium nitrate. Khim. prom. 41 no.1: 1[illegible]-18 Ja '65. (MIRA 18:3)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROV, V.V.

Reviews and bibliography. Khim. prom. 41 no. 12:933 D '65
(MIRA 19:1)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

BIRYUKOV, V.V.; KARPOV, V.V.

Mathematical models of vapor-liquid exchangers with variable vapor pressure. Khim. prom. 42 no.9:696-698 S '66. (MIRA 18:9)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

ACC NR: AP6029018 SOURCE CODE: UR/0413/66/000/014/0021/0021

INVENTOR: Chalykh, S. N.; Kafarov, V. V.; Vigdorov, A. S.; Savont'yanov, N. I.; Gromova, I. I.; Podgorbunskikh, M. T.; Kolesnikov, A. S.; Luferov, V. Ye.

ORG: none

TITLE: Preparation of salts of dithiocarbamic acid derivatives. Class 12, No. 183735. [announced by Scientific Research Institute of Organic Intermediates and Dyestuffs (Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley)]

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 21

TOPIC TAGS: sodium dithiocarbamate, alkyl dithiocarbamate, dialkyl dithiocarbamate, carbamic acid, organic salt

ABSTRACT: Usually, salts of dithiocarbamic acid derivatives of the general formula:
(where R_1 and R_2 are CH_3 or C_2H_5; Me is Na) are obtained by the reaction of carbon disulfide with a solution of an amine in the presence of alkalies. To improve the technological process and to increase the yield and quality of the final product, the process is carried out in dilute solutions of amines with a 5% excess of CS_2

Card 1/2 UDC: 547.496.2.07

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

ACC NR: AP6029018 SOURCE CODE: UR/0413/66/000/014/0021/0021

INVENTOR: Chalykh, S. N.; Kafarov, V. V.; Vigdorov, A. S.; Savost'yanov, N. I.; Gromova, I. I.; Podgorbunskikh, M. T.; Kolesnikov, A. S.; Luferov, V. Ye.

ORG: none

TITLE: Preparation of salts of dithiocarbamic acid derivatives. Class 12, No. 183735. [announced by Scientific Research Institute of Organic Intermediates and Dyestuffs (Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley)]

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TOPIC TAGS: sodium dithiocarbamate, alkyl dithiocarbamate, dialkyl dithiocarbamate, carbamic acid, organic salt

ABSTRACT: Usually, salts of dithiocarbamic acid derivatives of the general formula:
(where R_1 and R_2 are CH_3 or C_2H_5; Me is Na) are obtained by the reaction of carbon disulfide with a solution of an amine in the presence of alkalies. To improve the technological process and to increase the yield and quality of the final product, the process is carried out in dilute solutions of amines with a 5% excess of CS_2

Card 1/2 UDC: 547.496.2.07

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFANOVA, V.V.

Studying the grayling of Lake Nizhneye Kulagash-bazhi (Chulyshman River basin). Izv. Alt. otd. Geog. ob-va SSSR no.5:165 '65. (MIRA 18:12)

1. Tomskiy gosudarstvennyy universitet.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

IOGANZEN, B.G.; GUNDRIZER, A.N.; KAFANOVA, V.V.; KRIVOSHCHEKOV, G.M.

Lake Teletskoye as a unique body of water of the Altai and an object deserving protection. Izv. Alt. otd. Geog. ob-va SSSR no.5:216-217 '65. (MIRA 18:12)

1. Tomskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

LOBACHEVA, V.P.; SHCHERBININA, A.P.; KAFAROV, Z.Z.

Printing of white fabrics with substantive turquoise and lightfast colors. Tekst.prom. 23 no.5:71-72 My '63. (MIRA 16:5)
(Textile printing)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KARAKOVA, D. D., Cand Med Sci -- (diss) "Blood loss in thyrotoxicosis in connection with treatment by iodine-131." Moscow, 1960. 8 pp; (Ministry of Public Health USSR, Central Inst of Advanced Training of Physicians); 200 copies; price not given; (KL, 21-60, 130)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KAFAROVA, R. Z.

"Analysis of Taste Reception by the Vascular Conditioned Reflex Method in Persons of Different Age Groups." Cand Biol Sci, Azerbaydzhan State U imeni S. M. Kirov, Min Higher Education USSR, Baku, 1955. (KL, No 11, Mar 55)

SO: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

Abs Jour : Ref Zhur Biol., No 1, 1958, 2965

Author : A.I. Karayev, R.Z. Kafarova, Sh. Rustamova.

InstAPPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"

Title : The Influence of Irritation of Chemoceptors of the Liver and Mechanoceptors of the Rectum on the Phagocytic Activity of the Leukocytes.

Orig Pub : Byul. eksperim. biol. i meditsiny, 1956, 41, No 6, 58-61

Abstract : In rabbits the phagocyte activity of leukocytes (PhAL) in relation to a killed culture of staphylococcus aurens was determined, after which an irritation of the chemoceptors of the liver was produced by placing on the surface of the liver a solution of acetylcholine (1 : 1000). In the experimental animals a diminution of Ph A L took place, which lasted about one hour. This phenomenon was of a reflex character, becuase the placing of acetylcholine on a preliminary novocainized surface of the liver was not

Card 1/2

Card 2/2

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1

KARAYEV, A.I.; KAFAROVA, R.Z.

Effect of stimulation of chemoreceptors of the parathyroid gland on the calcium content of the blood. Uch.zap.AGU.Biol.ser. no.2: 49-56 '59. (MIRA 13:6)
(PARATHYROID GLAND--INNERVATION)
(CALCIUM IN THE BODY)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619910004-1"